a non-metallic cylinder arranged around said rotor to restrain both said body portion and said end turn portions of said winding against forces resulting from a rotation of said rotor.

38. The electric machine of claim 37 wherein said cylinder is made of a graphite epoxy composite.

39. The electric machine of claim 38 wherein said cylinder is a single integral cylinder.

40. The electric machine of claim 37 wherein said rotor includes a body portion which extends along a rotational axis of said rotor and two end faces which axially oppose one another, and said cylinder extends along said rotational axis of said rotor so that said cylinder surrounds said body portion of said rotor and extends axially beyond both of said end faces.

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41. The electric machine of claim 37, wherein said cylinder extends axially beyond said end turn portions of said rotor winding.

42. The electric machine of claim 37 wherein said cylinder has a plurality of holes defined therethrough.

43. The electric machine of claim 42 wherein said plurality of holes are a plurality of ventilation holes and said rotor includes a plurality of slots formed therein for receiving said winding, said plurality of ventilation holes being respectively positioned with respect to ventilation holes in said winding to form a plurality of ventilation passages.

44. The electric machine of claim 43 further comprising a fan arranged at an axial end of said cylinder.

45. The electric machine of claim 42 wherein said plurality of holes are a plurality of balance plug holes and said rotor includes at least one opening formed therein, one of said plurality of balance plug holes being aligned with said opening to allow a balance plug to be engaged into said opening through said one of the plurality of balance plug holes.

46. The electric machine of claim 37 wherein said rotor includes a groove on its outer periphery and said cylinder includes a protrusion on its inner periphery which engages said groove of said rotor.

47. A method of forming an electric machine comprising:

providing a rotor;

disposing a rotor winding on said rotor, said rotor winding having a body portion and end turn portions; and

arranging a non-metallic cylinder around said rotor to restrain both said body portion and said end turn portions of said winding against forces resulting from a rotation of said rotor.

48. The method of claim 47 wherein said cylinder is made of a graphite epoxy composite.

49. The method of claim 48 wherein said cylinder is a single integral cylinder.

50. The method of claim 47 wherein said rotor is provided to have a body portion which extends along a rotational axis of said rotor and two end faces which axially oppose one another,

and said cylinder is arranged such that said cylinder extends along said rotational axis of said rotor to surround said body portion of said rotor and extends axially beyond both of said end faces.

51. The method of claim 50 wherein said cylinder extends axially beyond said end turn portions of said rotor winding.

52. The method of claim 48 further comprising defining a plurality of holes through said cylinder.

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53. The method of claim 52 wherein said plurality of holes are a plurality of ventilation holes and further comprising forming a plurality of slots in said rotor for receiving said winding, said plurality of ventilation holes being respectively positioned with respect to said plurality of ventilation holes defined in said winding to form a plurality of ventilation passages.

54. The method of claim 53 further comprising arranging a fan at an axial end of said cylinder.

55. The method of claim 52 wherein said plurality of holes are a plurality of balance plug holes and further comprising forming at least one opening in said rotor, aligning said opening with one of said plurality of balance plug holes, and engaging a balance plug into said opening through said one of the plurality of balance plug holes.